HealthFacts RI

Rhode Island All Payer Claims Database
Data User Guide

Version 1.0

June, 2017

Table of Contents

HealthFacts RI 2015 1.0 Release Notes

Issued: June, 2017

Data in this release includes medical and pharmacy claims with dates of service between January 1, 2011 and December 31, 2015, and information for the same period about member enrollment and healthcare providers.

The State plans to make data available for release on an annual basis, once a full year of new data is complete and fully processed by HealthFacts RI. This typically takes six months from the date of service.[1] Therefore, the State plans to release each year's data during the second half of the following year. For example, 2016 data will be available for release in the second half of 2017.

HealthFacts RI data collection and data release are governed by the RI APCD Regulations.

HealthFacts RI Data Release 2015 1.0 Notes

The following data is available in the 2015 1.0 data release products:

- Release 2015 1.0 contains updated data submitted by payers in July 2016.
- Release 2015 1.0 contains data submitted according to the RI APCD Technical Specifications Manual (Version 1.5).
- Release 2015 1.0 contains the following payers:

Commercial Payers	Public Payers
Blue Cross Blue Shield of RI	Medicaid
United Healthcare	Medicare (Parts A, B, D)
Neighborhood Health Plan of RI	
Tufts Health Plan	
Harvard Pilgrim Health Plan	
Aetna	
Cigna	
CVS Health	

- Release 2015 1.0 contains data for the following lines of business[2] for service dates 2011-2015, as illustrated in the table below. Green shaded boxes indicate that the specified data (e.g. Medical Enrollment and Claims for 2015) is included in this release for the indicated line of business. Grey shaded boxes indicate that the data is not included (footnotes provide an explanation for why data is excluded).

---

[1] See the *Claims Lag* section of this guide for a full explanation of lag time from when the service is rendered to when the claim is available in the APCD.

[2] Some commercial payers submit data for multiple lines of business. For example, Aetna submits data for their regular commercial business (Aetna) and Medicare Advantage plans (Aetna – Medicare). Some payers only submit medical claims (United Behavioral Health) or only pharmacy claims (CVS Health), depending on what type of benefits they offer.

Submitter Name	Medical Enrollment + Claims					Pharmacy Enrollment + Claims					Provider Files				
	2011	2012	2013	2014	2015	2011	2012	2013	2014	2015	2011	2012	2013	2014	2015
Aetna	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Aetna (Medicare)	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
BCBS of RI	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Cigna East	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Cigna West	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
CVS Health[3]						✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Harvard Pilgrim Healthcare	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Medicaid	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Medicare/CMS[4]	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Neighborhood Health Plan of RI[5]	✓	✓	✓	✓	✓						✓	✓	✓	✓	✓
Neighborhood Health Plan (DME)	✓	✓	✓	✓	✓						✓	✓	✓		
Neighborhood Health Plan (Behavioral Health)	✓	✓	✓	✓	✓						✓	✓	✓		
Neighborhood Health Plan (Pharmacy)						✓	✓	✓	✓	✓	✓	✓	✓		
Tufts Health Plan	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
United Behavioral Health[6]	✓	✓	✓	✓	✓						✓	✓	✓	✓	✓
United Healthcare	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
United Healthcare (Medicare & Retirement)	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
United Healthcare (New England)	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
United Healthcare (Student Resources)	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

[3] CVS Health provides pharmacy benefits only.

[4] The APCD receives an annual file from CMS that contains member enrollment, medical claims, and pharmacy claims information for Medicare FFS beneficiaries. CMS files do not include provider data. Medicare FFS data available in HealthFacts RI is one to two years behind commercial and Medicaid data.

[5] Neighborhood Health Plan of RI submits all pharmacy data via the NHPRI (Pharmacy) line of business. In 2014, they began submitting all provider data through their main NHPRI line of business.

[6] United Behavioral Health provides medical benefits only.

HealthFacts RI Overview

History of the RI APCD

HealthFacts RI is Rhode Island's All Payer Claims Database (APCD), a large-scale database that systematically collects healthcare claims data from a variety of payer sources, including Medicare, Medicaid, and RI's nine largest commercial payers.

In 2008, RI passed legislation to enable a *Healthcare Quality and Value Database* (Chapter 23-17.17-9) to collect healthcare claims data from payers. In 2013, the RI APCD Regulations (R23-17.17) were issued to provide data collection guidelines and data release policies and procedures. The goals of HealthFacts RI are threefold: to identify areas for improvement, growth, and success across the healthcare system; to understand and quantify health system performance and healthcare transformation; and to provide meaningful comparison and actionable data and reports to help inform policy and consumer decisions.

HealthFacts RI is a multi-agency initiative between the RI Department of Health (RIDOH), the Office of the Health Insurance Commissioner (OHIC), the Executive Office of Health and Human Services (EOHHS), and HealthSource RI (HSRI), the RI Health Benefits Exchange.

Data Collected

HealthFacts RI includes data from commercial, Medicare, and Medicaid payers who have over 3,000 covered lives in Rhode Island. Although data collection began in May 2014, payers submitted historic data from 2011 to 2013. The database currently contains healthcare claims and related data from 2011 to 2016. Data collection is ongoing.

Payers are required to submit four types of files to the database, on a monthly or quarterly basis[7]: Eligibility File, Medical Claims File, Pharmacy Claims File, and Provider File. For a full description of the data elements contained in each file, see the RI APCD Technical Specifications Manual (TSM).

Eligibility File

The Eligibility file includes medical and pharmacy enrollment information for the members covered by each payer during the reporting period. Eligibility files include member demographic information and information regarding an individual's plan and coverage type.

Medical Claims File

The Medical Claims file includes information on the medical services rendered to covered individuals during the reporting period. This file contains a wealth of useful cost and utilization data, such as diagnosis and procedure codes, charge amount, paid amount, copay amount, deductible amount, type of setting, and provider IDs, among other data.

Pharmacy Claims File

The Pharmacy Claims file includes information on pharmacy services rendered to covered individuals during the reporting period. Among the data elements submitted in this file are national drug code, drug name, national pharmacy ID, prescribing provider ID, generic drug indicator, plan paid amount, copay amount, and deductible amount, among other data.

---

[7] Submission frequency is based on each payer's preference.

Provider File

The Provider file includes information on the providers associated with the medical and pharmacy services submitted during the reporting period. These files contain data related to healthcare providers themselves, including elements such as National Provider ID (NPI), provider name, provider specialty, and provider geographic information (e.g. city or zip code), among other data.

Privacy and Security

There are several privacy and security policies in place to protect the HealthFacts RI database and ensure member data remains confidential and secure.

Most importantly, all HealthFacts RI data is de-identified, in that payers remove all information that could directly identify an individual. For a full list of identifiers that are excluded from the database, see the *Identifiable Data* section of this guide. De-identification is accomplished through the use of an independent "Lockbox Services Vendor". Before sending any data to the APCD, payers submit member data (with identifiable information) to the Lockbox Services Vendor. The Lockbox Services Vendor assigns a unique APCD-specific ID to each individual, and sends this Unique ID back to each payer. Payers then use this Unique Member ID instead of any identifiable information in the healthcare claims data sent to HealthFacts RI. This method ensures that neither the State nor any APCD vendor ever has access to both the claims data and the patient identifying information. This protects member privacy and reduces the chance of identifying an individual using the HealthFacts RI data.

Even though HealthFacts RI data is de-identified, all members still have the option to "opt-out" of having their data submitted to the APCD at any time. For more information about opt-out, see the *Opt-Out Provision* section of this guide, or the *HealthFacts RI FAQs: Questions about the Opt-Out Process.*

Finally, all individuals or organizations that have access to HealthFacts RI data must follow strict security measures that comply with both HIPAA, the HITECH Act, and HHS guidance. Security measures include encryption for transmitted and stored data; strict access, roles, and permissions standards; and storage on secure servers with appropriate backup, recovery, and disaster plans. These security measures are ensured and codified through contractual agreements with the State.

Data Management

HealthFacts RI is governed by an Interagency Staff Workgroup (ISW) comprised of representatives from RIDOH, EOHHS, OHIC, and HSRI. The ISW oversees HealthFacts RI data vendors who collect data, and store, host and manage the database. The Data Management Vendor is responsible for collecting, aggregating, and enhancing the data, as well as sending fully processed data extracts to the State. The Lockbox Services Vendor is responsible for de-identifying enrollment data by assigning a unique member ID to each individual, maintaining the opt-out website, and flagging any members who have opted-out so that their information is not submitted to the APCD.

Data Validation

In order to ensure that the HealthFacts RI data is as correct and complete as possible, the data undergoes three rounds of validation and quality assurance checks.

Tier 1 Validation Checks

Tier 1 validation checks are automated checks used to identify common data errors. Hundreds of checks are run against data files as they are submitted by payers to ensure that the incoming data meets the

following general quality standards:

- Data is submitted in the correct format for each field and elements within each file follow the specifications laid out in the [TSM](#) (correct element names, length, and valid values);
- Submitted data meets the thresholds for allowable errors/blanks;
- Counts and totals match what the submitter reported;
- Required and conditional fields are populated;
- Data submitted are valid and/or logical for each field and in relationship to each other; and
- Files match across common data elements.

The results of the Tier 1 validation checks are sent back to each payer within five days. Payers are required to correct any errors and re-submit the files.

Tier 2 Validation Checks

Tier 2 validation checks are also automated and performed quarterly, but occur once the data has passed the Tier 1 checks and entered the system. The purpose of this level of validation is to check for the reasonableness of the submitted data, and to compare it against past submissions, including month-over-month trend analyses and consistency in data volume and quality. Payers are notified of any issues identified as part of Tier 2 checks within ten days and are required to respond and/or re-submit data accordingly. Additionally, the Data Management Vendor produces quarterly post-Level 2 validation reports. These reports offer an additional level of quality assurance, as they are used to identify trends in submitted data and any significant deviations. These reports include the following metrics:

- Demographics (e.g. member counts, percent male, etc.);
- Rolling aggregation figures (e.g. dollar amounts for paid services in a given month, units per enrolled member per workday, etc.);
- Count of medical member months compared to pharmacy member months for each submitter;
- Exchange-related enrollment figures (e.g. purchased through the exchange, percent catastrophic coverage plans, etc.);
- Number of records dropped out due to each exclusion and/or business rule applied for each submitter and for the full database;
- Pharmacy (e.g. percent refills, percent generics, etc.);
- Provider and facility (e.g. inpatient counts, provider type, etc.);
- Count of members covered under ERISA-eligible plans;
- Opt-out tallies;
- "Unknown" tallies;
- Statistics on the Master Patient Index; and
- Statistics on the Master Provider Index.

Tier 3 Validation Checks

Tier 3 validation checks are annual, post-processing validation reports. These reports are sent back to payers within thirty days of annual data being processed and enhanced, and show the degree to which HealthFacts RI data aligns with the submitters' internal metrics. These reports include information on how this years' data compares to past years' data, and compares the data to database-wide averages. The Data Management Vendor works with the submitters to investigate any data issues, determine reasons for discrepancies, and identify remediation strategies for the current submission and submissions going forward.

HealthFacts RI Data Release

HealthFacts RI offers different types of data products to meet different users' needs. Each product has unique advantages and a distinct request process.

Data Products

Summary Tables and Reports

Summary data tables and reports are available free of charge on the HealthFacts RI webpage (under the "About" tab). These reports and tables focus on key healthcare issues and are highly summarized. To protect patient privacy, tables and reports do not include any data points based on fewer than eleven members (known as "cell suppression"). To date, the State has published three reports:

- *Potentially Preventable Emergency Room (ER) Visits,* which looks at reasons for ER visits that could have been potentially avoided or prevented.

- *A Preliminary Look at Chronic Conditions in Rhode Island,* which explores the impact of chronic diseases on healthcare utilization and spending in the State.

- *Potentially Preventable Readmissions Related to Behavioral Health,* which looks at how behavioral health conditions affect a person's chance of having a hospital readmission that could have potentially been avoided.

Additional reports and tables will be made available in the future.

Standard Claims Extracts

Standard extracts are pre-built, claims-line level extracts with individual member detail that may be used for statistical and other complex analyses. As these extracts contain a high level of detail, they are intended for research purposes and require a full application and review process. As part of the application, requesters must justify why claims-level detail is necessary for their project. Requesters must pay a fee, sign a Data Use Agreement, and be approved by the Director of the Department of Health to receive standard claims extracts.

There are two types of standard extracts available for request, for both medical claims and pharmacy claims:

- *Core Extract* (moderate detail): The Core Extract contains data elements related to member enrollment and demographics, medical and/or pharmacy claims, and provider information associated with the requested claims. The Core Extract contains a lower level of detail in that only service and eligibility months and years, and member state and 3-digit zip code are reported.

- *Extended Extract* (high detail) – The Extended Extract contains all data elements from the Core Extract, plus the full dates of service and eligibility, as well as member city and 5-digit zip code. Requesters requiring Extended Extracts must justify why this higher level of detail is necessary for their project.

The HealthFacts RI Data Element Dictionary provides a full description of the data elements available in each extract. On average, medical claims extracts are 70GB, and pharmacy extracts are 25GB. Because

of the large size of standard extracts, users will need robust database infrastructure (SQL Service, Oracle, etc. with 1-2 TB storage) in which analytic files can be prepared for use with statistical software, such as SAS or R, to use standard extracts. If approved for use, standard extracts are delivered to users as flat text files via SFTP.

There are three options for requesting Standard Claims Extracts:

- *One-time request*: This is for a one-time request for standard extracts for a single project.

- *Single-project subscription*: This is an annual subscription for standard claims extracts to be used for a single project. It includes:

    o   Initial delivery of requested standard claims extracts;
    o   Quarterly or annual data refreshes of the two most recent years of data requested, plus extracts for any new year of data available.

- *Multi-project institutional subscription*: This is an annual subscription license for research and other institutions to use standard claims extracts for multiple projects. It includes:

    o   Initial delivery of requested standard claims extracts;
    o   Quarterly or annual data refreshes of the two most recent years of data requested, plus extracts for any new year of data available.

Custom Requests

Custom requests are for data that is not already available on the HealthFacts RI website, and for which standard claims extracts are not appropriate. This may include custom aggregated reports, or custom extracts, and may require custom analytics to be applied. Requesters define the type of data, data elements, and any custom analytics needed. All custom requests require an application. Custom requests require review by the Data Release Review Board and approval by the Director of the Department of Health when:

- Individual claims with member-level detail are included (e.g. member ID, 5-digit zip code, etc.);
- Results of cells based on fewer than 11 members are displayed.

Requests for custom aggregate data in which cells based on fewer than 11 members are not displayed do not require a full review and approval process.

Data Products Comparison

	Summary Tables and Reports	Standard Claims Extracts	Custom Requests
Description	Summary tables and reports available free of charge on RIDOH website.	Pre-built extracts with individual medical and/or pharmacy claims and associated member and provider detail.	Data not publicly available on the HealthFacts RI website, and for which standard claims extracts are not appropriate. May include custom reports, extracts, and/or analytics.
Level of Detail	Summary	Claims-line level	Summary or claims-line level
Intended Audience	General Public	Researchers and Sophisticated Users	Any (providers, researchers, non-profits)
Potential Uses	• Inform consumers on key healthcare issues • Highlight issues to policymakers • Provide statistics for grant applications • Track healthcare spending and utilization trends overtime	• Evaluate interventions and policy changes • Identify cost drivers and spending trends • Compare healthcare quality across providers • Evaluate effects of new treatment • Compare payers' or employers' population health to statewide averages	• Measure provider performance with custom attribution methodology • Assess trends in utilization • Measure prescription drug use • Evaluate effects of specific policies on healthcare spending
Available Options	• Potentially Preventable Emergency Room Visits • A Preliminary Look at Chronic Conditions in Rhode Island • Potentially Preventable Readmissions Related to Behavioral Health	Medical and/or pharmacy claims for: • Core Extract (moderate detail) • Extended Extract (high detail) Requests may be for: • One-time request • Single-project subscription • Multi-project institutional subscription	• Custom aggregate reports without small cells displayed • Custom aggregate reports with small cells displayed • Custom claims-line level extracts • Custom analytics
Access method	Available on RIDOH HealthFacts RI webpage	Full application and review process	All requests require application. Review process depends on type of request.
Processing Time	None	2-4 months	Determined on a case-by-case basis
Fees	None	• One-time request: Academic researchers, government agencies, data submitters: $7,000/extract/year; Others: $21,000/extract/year • Single-project subscription: Academic researchers, government agencies, and data submitters: Initial delivery same as one-time request, $7,000 per refresh; Others: Initial delivery same as one-time request, $21,000 per refresh • Multi-project institutional subscription: Determined on a case-by-case basis	Determined on a case-by-case basis

Data Request Process

Summary Tables and Reports

Visit the HealthFacts RI webpage and click on the "About" tab for a list of summary reports and tables. This data is available free of charge to the public.

Requesters should check the HealthFacts RI webpage before requesting additional data to determine if public reports and tables will meet their needs.

Standard Claims Extracts

All requests for standard claims extracts require a full application and review process.

One-time request

1. Review the paper copy of the Standard Claims Extracts Application and gather all necessary documentation before beginning the online application. **Note: Applicants cannot save and return to the online application once is it started.**
2. Complete the online application.
3. Attach a signed RI APCD Data Use Agreement to the application.
4. Complete the Application Fee Remittance form and mail check to RIDOH.
5. Once application and fee are received, a member of the HealthFacts RI team will contact you regarding next steps.
6. The application is posted to http://www.health.ri.gov/data/healthfactsri/ for public comment for at least 10 business days.
7. The RI APCD Data Release Review Board reviews the application to ensure patient privacy is protected, and makes a recommendation to the RIDOH Director. Applicants are strongly encouraged, but not required, to attend this meeting in-person or via phone to answer any questions from Board members as they review the application.
8. The Director approves or denies the request based on the Board's recommendation.
9. If approved, the requester completes the Payment Schedule form and mails in a check for the data fee to RIDOH.
10. The State transfers extract(s) to the applicant (30-45 days after request is approved).

The full request process may take a few months from when the application is received to when the data is transferred to the requester. Applicants are strongly encouraged to complete the application as soon as possible to account for any unanticipated delays.

The State charges the following fees for one-time requests for standard claims extracts:

- Academic researchers, government agencies, data submitters: $7,000 per extract per year
- Others: $21,000 per extract per year

These fees are intended to recover the costs associated with developing data products and making them available for request.

Single-project subscription

The process for requesting a single-project subscription is the same as for a one-time request, with the following exceptions:

- Payment for data refreshes is due on an annual basis, at the beginning of each project year;

- Refreshes will be transferred to the requester within 30 days of the quarter start for quarterly refreshes, and within 30 days of the year start for annual refreshes;

The State charges the following fees for single-project subscriptions to standard claims extracts:

- Academic researchers, government agencies, and data submitters: $7,000 per extract per year of data requested for initial delivery; $7,000 for each refresh (refresh price includes all extracts and years of data).
- Others: $21,000 per extract per year of data requested; $21,000 for each refresh (refresh price includes all extracts and years of data).

Multi-project institutional subscription

The process for an institution to apply for a multi-project subscription is the same as for a single-project subscription; however, there is an additional application and review process for each project for which the data will be used. This process is summarized below:
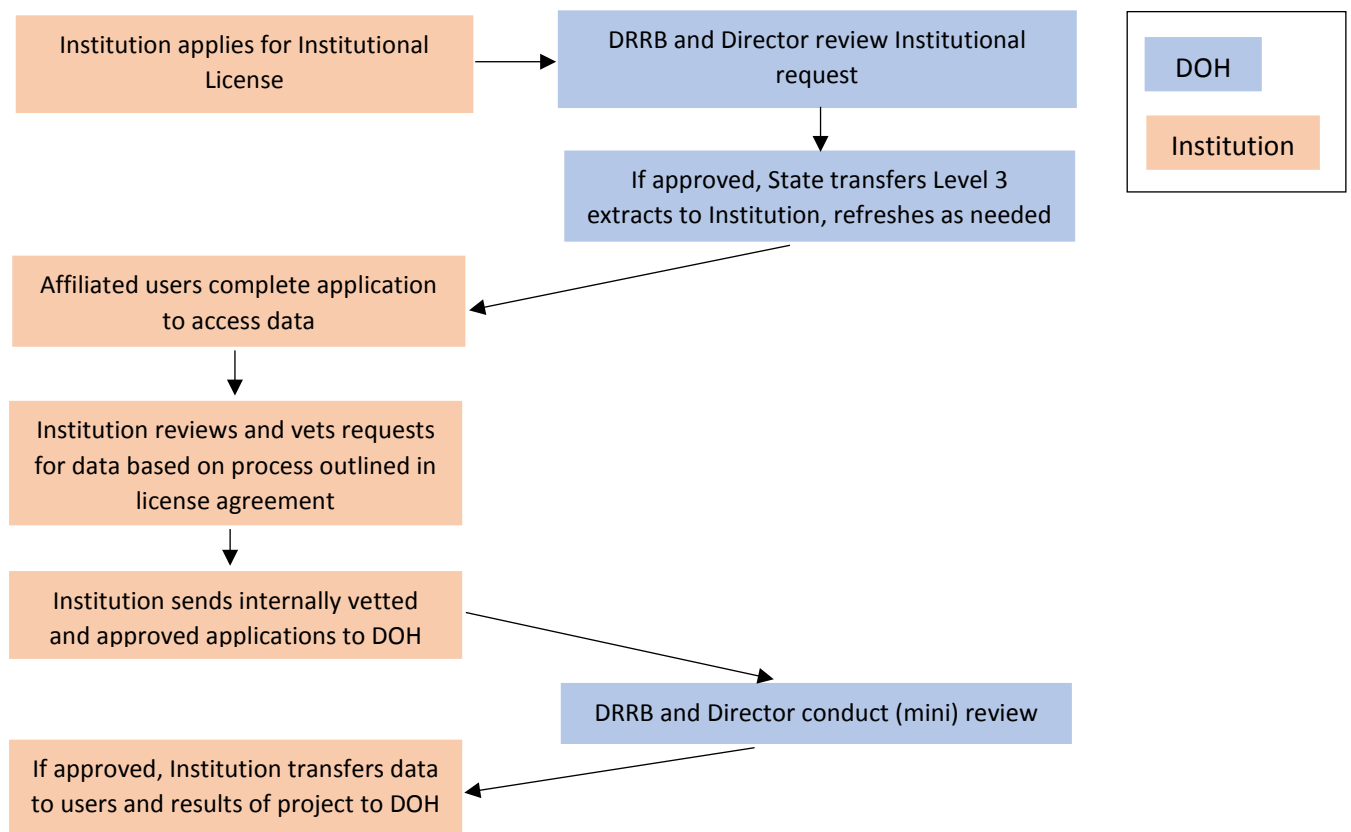
To apply for a multi-project subscription, institutions must agree to the following conditions:

- License is limited to those entities with the capacity to properly protect the data, manage and vet user requests, and oversee internal users

- Institution signs a single Data Use Agreement, and is liable for any misuse of the data by any of their users/projects (e.g. secure storage, data dissemination, cell suppression, etc.)

- Users may include staff, researchers, and other partners affiliated with the institution

- After the institution vets each user request, applications go to the Data Release Review Board for final review and approval; however, they may qualify for a "mini" review (i.e. full security review may not be required because the project falls under the institutional license).

Pricing for multi-project subscriptions is to be determined on a case-by-case basis, depending on the number of extracts and refreshes required, the length of the subscription, and the number of individual projects that will use the data annually.

Institutions interested a multi-project institutional subscription should contact the HealthFacts RI team at DOH.HealthFactsRI@health.ri.gov to discuss eligibility and pricing.

Custom Requests

To apply for a custom request:

1. Contact the HealthFacts RI team at DOH.HealthFactsRI@health.ri.gov to get a price quote for your request.
2. Review the paper copy of the Custom Requests Application and gather all necessary documentation before beginning the online application. **Note: Applicants cannot save and return to the online application once is it started.**
3. Complete the online application.
4. Complete the Application Fee Remittance form and mail check to RIDOH.
5. Once application and fee are received, a member of the HealthFacts RI team will contact you regarding next steps.
6. The application is posted to http://www.health.ri.gov/data/healthfactsri/ for public comment for at least 10 business days.

If your request is for aggregate data in which results of small cells (fewer than 11 members) will be displayed, or for individual claims, there will be a full review and approval process.

1. The RI APCD Data Release Review Board reviews the application to ensure patient privacy is protected, and makes a recommendation to the RIDOH Director. Applicants are strongly encouraged, but not required, to attend this meeting in-person or via phone to answer any questions from Board members as they review the application.
2. The Director approves or denies the request based on the Board's recommendation.
3. If approved, the requester completes the Payment Schedule form and mails in a check for the data fee to RIDOH.
4. The State transfers report(s) and/or extract(s) to the applicant.

Pricing and timelines for custom requests are determined on a case-by-case basis depending on the request.

RI APCD Data Release Review Board

The RI APCD Data Release Review Board (DRRB) is an eleven-member, multi-disciplinary advisory board to the Director of RIDOH. The DRRB is comprised of members representing: health insurers, healthcare facilities, healthcare consumers, physicians, privacy advocacy organizations, researchers, and RI state agencies. The purpose of the DRRB is to advise the Director about whether requests are consistent with HealthFacts RI member privacy guidelines.

The DRRB reviews requests for standard extracts, and custom requests for aggregate data in which small cells are displayed or for individual claims. The DRRB reviews applications to ensure that:

- Appropriate privacy and security protections are in place to protect member privacy;
- Applicant will adhere to the HealthFacts RI cell size suppression policy;
- Access to data is necessary to achieve the project's intended goals; and
- Applicant is qualified to protect and responsibly handle HealthFacts RI data.

The DRRB then makes a recommendation to the Director as to whether the application should be approved. The RIDOH Director has the ultimate authority to approve or deny requests for HealthFacts RI data.

The DRRB meets monthly and meetings are open to the public. The annual meeting schedule, agendas and minutes are available on the Secretary of State website. Applications are reviewed in the order received, and must be posted for public comment for at least 10 business days before they can be reviewed. DRRB members will consider all public comments as part of their review.

Contact for Data Request Questions

For questions related to data products and requests, see the Data Release section of the *HealthFacts RI FAQs*, or contact:

- DOH.HealthFactsRI@health.ri.gov, or
- Alyssa Harrington, Data Release Project Manager, at aharrington@freedmanhealthcare.com or 617-243-9509 x204.

Interpreting Claims Data

HealthFacts RI contains healthcare claims data, which may be different from other data sets users have worked with in the past. This section explains some important concepts for working with claims data, and certain nuances unique to the RI APCD.

Claims Lag

It is important to understand that claims data is not real-time clinical data. After a healthcare service is performed (or a prescription is filled), it takes insurance companies some time to process and pay for the procedure on behalf of their covered members. In some instances, a claim may be paid or adjusted several times prior to it being finalized. This span of time between when a service is performed and when the payment for it is finalized is referred to as "**claims lag**."

Figure 1: Claims Lag

Commercial Claims

Lag Time	% Complete
0-1 month	35%
1 month	80%
2 month	90%
3 month	95%
4 month	96%
5 month	97%
6 month	98%
12 month	99%

Medicaid Claims

Lag Time	% Complete
0-1 month	12%
1 month	68%
2 month	75%
3 month	83%
4 month	86%
5 month	89%
6 month	90%
12 month	96%

For commercial insurance companies, approximately 95% of claims are finalized within three months of the service being performed (i.e. there will not be any more payments or adjustments for 95% of services). In other words, the data is considered 95% complete after three months. This completeness increases to 95-98% after six months from the date of service. Medicaid programs typically take longer to pay claims—in Rhode Island, 80-85% of Medicaid claims are finalized within three months of the service being performed and 85-90% are finalized within six months. Claims lag does not apply to Medicare FFS data, as the State receives an annual claims file from CMS that is considered complete.[2]

Therefore, users of HealthFacts RI must take into account *when the data was submitted and for what reporting period*, in order to understand the claims lag and in turn, completeness of the data.

Additionally, because it takes time for HealthFacts RI to collect and process the submitted data, this processing time must also be considered when determining data completeness.

Example:

The HealthFacts RI standard claims extracts contain data from 2011-2015, and are based on files that were submitted at the end of July 2016. Using Figure 1 above, commercial data for services performed in December 2015 has 7 months of claims lag (i.e. the time between December 2015 when the service was performed, and July 2016 when the data was submitted) and is therefore approximately 98% complete. However, for Medicaid data, only about 86% of the data for services performed in December 2015 is complete. We would have to look at data for services performed in July 2015 or earlier (a full year of claims lag or more) to reach 95% completeness.

Users should account for claims lag when conducting analyses based on dates of service.

---

[2] Because Medicare FFS data come from CMS, the Medicare FFS data available in HealthFacts RI is one to two years behind commercial and Medicaid data.

Claim Adjustments and Denials

Claim Adjustments

As part of their monthly or quarterly submission, payers may also submit any claim adjustments to previously submitted claims. These adjusted claims replace any previously submitted versions of the same claim, to avoid duplicate claims. To accomplish this, the Data Management Vendor performs "claims versioning", in which multiple versions of the same claim are combined into one record. Only the final version of the claim is included in the database. When the data is processed each quarter, the Data Management Vendor sends the full, most recent version of the database. This version replaces the version sent in the previous quarter.

One exception to this rule is what is called an "orphaned" claim. This occurs when a claim adjustment is submitted to the APCD, but the original claim that is being adjusted was never submitted. These orphaned claims have negative dollar amounts because they are reversals of a previously paid claim; however, there can be no claims versioning to report the final paid amount because the original claim has not been submitted. This happens most often in the early months of the data collected by HealthFacts RI. For example, consider a scenario where a claim with a service date of 9/1/2010 is originally paid on 11/15/2010. The claim is then reversed/adjusted in January 2011 and is therefore submitted to HealthFacts RI in 2014 as part of the historical data submission (which consisted of the reporting of claims data from 2011-2013). Because the original claim was paid prior to the HealthFacts RI reporting cut-off date of 1/1/2011, it is never submitted. Therefore, the reversed claim is the only claim in the database, and has a negative dollar amount. These instances are flagged as "Orphaned claims" in the database and make up about 0.1% of the claims in HealthFacts RI. Users can choose to exclude orphaned claims by using the orphaned adjustment flag field.

Denied Claims

Payers report all processed claims to HealthFacts RI. This includes claims for which the insurer denied payment. Claims may be either originally denied, or a paid claim that is then adjusted to denied. Denials may occur for two reasons:

- The member was not covered by the insurer at the time at which the service was performed; or
- The insurer does not cover the service that was performed.

Depending on when the claim is denied, and whether the member has another insurance carrier that will pay for the services, the denied claim may or may not be reported to HealthFacts RI. For example:

Scenario A:

- Payer A originally denies the claim because the member is no longer covered by Payer A, rather the member is covered by Payer B.
  - Payer A denies the claim and it is not reported to HealthFacts RI.
  - Payer B pays the claim and reports it to HealthFacts RI as a paid claim.
- Result: The claim is included in HealthFacts RI as a standard, final paid claim from Payer B.

Scenario B:

- Payer A originally pays the claim and then subsequently reports it as denied because the member is no longer covered by Payer A, rather they are covered by Payer B.

- o Payer A reports the claim as being paid and then submits the adjustment of this claim, reporting to HealthFacts RI that this claim was denied. The claim is included in HealthFacts RI as a denied claim.
      - o Payer B pays the claim and also reports it to HealthFacts RI. The claim is included in HealthFacts RI as a paid claim.
  - Result: The same services for the same member are reported to HealthFacts RI twice, once as a denied claim by Payer A, and once as a paid claim by Payer B.

In the scenarios above, what if Payer B is not required to report data to HealthFacts RI[8]?

- **Scenario A:** This claim is never included in HealthFacts RI, since Payer A will not report an originally denied claim and Payer B does not report to HealthFacts RI. Therefore, the new re-billed claim is not included in the database.
- **Scenario B:** The claim from Payer A is included in HealthFacts RI as a denied claim, but the new re-billed claim is not reported since Payer B does not report to HealthFacts RI.

Scenario C:

- Payer A originally pays the claim and then subsequently reports it as denied because the service is not covered by Payer A.
  - o Payer A reports the claim as being paid and then submits the adjustment of this claim, reporting to HealthFacts RI that this claim was denied. This claim is included in the database as a denied claim. Since the reason for the denial is that the service is not covered, there will not be a new re-billed claim from a different payer.
- Result: The only claim for these services included in HealthFacts RI will be the denied claim from Payer A.

Given these different scenarios and their outcomes, users should carefully consider whether or not to include denied claims when designing their analyses. For financial analyses, such as total cost of care and total healthcare spending, denied claims generally should not be included, because these claims were ultimately not paid by the insurer. Denied claims can be excluded using the denied claim flag field. However, when measuring utilization, some users may want to include denied claims, as the services were in fact performed, they were just not paid by the insurer. If including denied claims in analyses, users may need to include logic to account for when the same services are reported twice (as in Scenario B) to avoid over-counting utilization.

Duplicate Eligibility Records

All payers report eligibility records for all members who are enrolled during the reporting period. In certain cases, one individual may have more than one eligibility record for the same timeframe. This happens if:

- A person is covered by more than one insurer at the same time;
- A person has more than one plan under the same payer—for example, if a person is covered by Payer A through their employer, and by Payer A through their spouse's family plan; or
- A payer uses a third party vendor to administer certain benefits to members—known as "carving out" certain services.

---

[8] Certain payers are exempt from reporting data to HealthFacts RI per the RI APCD Regulations. See the *Exemptions from Regulations* section of this guide for a list of exempt payers.

For example, United Healthcare may use United Behavioral Health to process behavioral health benefit claims. This third party vendor (United Behavioral Health) may submit data directly to HealthFacts RI on behalf of their "parent" payer (e.g. United Healthcare). In these cases, a member eligibility record is being reported twice for the same payer and timeframe—one eligibility record for the carved out behavioral health services submitted by United Behavioral Health, and the other eligibility record for all other services submitted by United Healthcare.

Users should consider which eligibility record(s) to include in their analyses depending on the type of analysis being performed. For example, if a user is counting unique members with medical coverage in a given year, the user should only count one eligibility record per person. If a user is analyzing behavioral health claims for United Healthcare, the user would link to the eligibility record for United Behavioral Health.

Data Limitations

While HealthFacts RI is a robust source of high-quality healthcare cost and utilization data, it is important to understand its limitations to make informed decisions about how to best use the data.

Non-Collected Data

Exemptions from Regulations

HealthFacts RI is governed by the RI APCD Regulations (R23-17.17), which specify who is required to submit data, what data should be submitted, and what and how data can be released.

Exempt Insurers

HealthFacts RI collects data from Rhode Island insurers with at least 3,000 covered lives, and so does not include small insurers with less than 3,000 members.[9] Additionally, the following insurance coverage is exempted from the Regulations:

- Hospital confinement indemnity;
- Disability income;
- Accident only;
- Long-term care;
- Medicare supplement;
- Limited benefit health insurance;
- Specified disease indemnity;
- Sickness or bodily injury or death by accident or both; or
- Other limited benefit policies.

Identifiable Data

According to Rhode Island law, the State may only collect de-identified healthcare claims data from insurers. This means that HealthFacts RI cannot collect any of the following "direct personal identifiers," as defined in the Regulations:

- Names;
- Business names when that name would serve to identify a person;
- Elements of patient birth dates, except for year of birth or year of birth within an age band;
- Postal address information other than town or city, state and 5-digit ZIP code;
- Specific latitude and longitude or other geographic information that would be used to derive postal address;
- Telephone and fax numbers;
- Electronic mail addresses;
- Social Security numbers;
- Vehicle identifiers and serial numbers, including license plate numbers;
- Medical record numbers;
- Health plan beneficiary numbers;
- Patient account numbers;

---

[9] For the definition of "Insurer" and other terms, refer to the RI APCD Regulations.

- Personal Internet protocol (IP) addresses and uniform resource locators (URL), including those that identify a business that would serve to identify a person;
- Biometric identifiers, including finger and voice prints;
- Personal photographic images; and
- Any other unique patient identifying number or characteristic, but not including the Encrypted Unique Identifier.

Other Exclusions

While HealthFacts RI contains healthcare information for over 1 million insured individuals, there are some data that is not collected in the database.

HealthFacts RI does not include data from the following sources:

- Commercial insurance plans with less than 3,000 covered lives in Rhode Island;
- Dental insurance;
- Insurance coverage exempted from the RI APCD Regulations (see Exempt Insurers section);
- Federal programs including Tricare, Federal Employees Health Benefits Program, Department of Veterans Affairs, and the Indian Health Service;
- Uninsured individuals and other payments made out-of-pocket; and
- Non claims-related payments, including disbursements made to healthcare providers as part of incentive programs for meeting certain cost or quality measures (e.g. pay-for-performance, shared savings/shared risk), alternative payments models (e.g. global, capitated, and episode-based payments) and payments for health information technology and other infrastructure payments.

NOTE: In March 2016, the U.S. Supreme Court ruled in *Gobeille v. Liberty Mutual,* that Vermont's APCD law was unable to require self-insured plans regulated by the federal Employment Retirement Income Security Act of 1974 (ERISA) to submit claims data to their database. Many insurers have since halted submission of self-insured ERISA plans' data to APCDs in every state, including Rhode Island. The RI leadership team is working with insurers and self-insured employers to encourage continued submission of self-insured data to the RI APCD.

Opt-Out Provision

According to the RI APCD Regulations, all members who are covered by insurers that are required to report data to HealthFacts RI must have the ability to "opt-out" of having their information submitted. Members may opt-out, or opt back in at any time. When data collection began in 2014, each payer sent its members a notification that their data would be submitted to the RI APCD, and provided instructions for opting out. Payers are also required to notify any new members that join their plans of the option to opt-out. Members may opt-out of the database by visiting a centralized opt-out website maintained by the Lockbox Services Vendor, or calling a hotline. About 2% of members across all payers have chosen to opt-out, meaning that their data is excluded from HealthFacts RI.

Although data collection began in 2014, payers were required to submit three years of historic data (2011-2013) to HealthFacts RI. Because payers first notified members of opt-out in 2014, any member who was enrolled from 2011 to 2013, but no longer enrolled in health insurance in Rhode Island in 2014 (due to moving, death, or becoming uninsured), could not be notified of opt-out. Because these

members' opt-out status is unknown, their data is also excluded from HealthFacts RI. If any member with an unknown opt-out status re-enrolls with an insurer who submits data to HealthFacts RI (and does not opt-out), their data will then be included in HealthFacts RI.

A summary of the number of members who have opted out or have unknown opt-out status by payer line of business follows.

Submitter Name	Counts as of:[10]	Members Opted-Out	Members with Unknown Opt-Out Status	Total Members[11]	% Opted-Out	% Unknown[12]
Aetna	6/30/2016	14	6,394	9,072	0.2%	70.5%
Aetna (Medicare)	6/30/2016	82	95	3,802	2.2%	2.5%
BCBS of RI	9/30/2016	8,693	49,325	334,905	2.6%	14.7%
Cigna East	8/31/2016	38	6,191	8,175	0.5%	75.7%
Cigna West	8/31/2016	3	208	448	0.7%	46.4%
CVS Health	9/30/2016	1,004	22,405	81,364	1.2%	27.5%
Harvard Pilgrim Health Care	10/31/2016	241	3,870	11,826	2.0%	32.7%
Medicaid	9/30/2016	2,849	687	313,742	0.9%	0.2%
Medicare/CMS	12/31/2013	7,274	N/A	191,345	0.6%	0.3%
Neighborhood Health Plan of RI	9/30/2016	1,188	525	205,324	3.5%	0.0%
Tufts Health Plan	9/30/2016	1,064	5,237	49,764	2.1%	10.5%
United Behavioral Health	12/31/2015	41	434	3,175	1.3%	13.7%
United Healthcare (UHC)	9/30/2016	1,447	26,356	22,929	0.1%	73.8%
UHC (Student Resources)	10/31/2016	20	16,919	14,9180	1.0%	17.7%
UHC (Medicare & Retirement)	9/30/2016	2,274	773	36,689	6.2%	2.1%
UHC (New England)	8/31/2016	499	180	83,900	0.6%	0.2%

Data Element Completeness

Occasionally, payers are unable to provide certain elements at the specified HealthFacts RI threshold level, or at all. In these cases, payers can request waivers exempting them from reporting on these elements altogether or reduced reporting criteria. Certain data elements are subject to more waiver requests than others, and therefore may not be as well populated in the database.

For a full list of the completeness of each HealthFacts RI data element by payer line of business, refer to the *RI APCD Data Completeness Report*. Data requesters should consider how completeness rates may affect their intended analyses.

Pharmacy Data

While all insurers and pharmacy benefits managers (PBMs) with greater than 3,000 Rhode Island members are required to submit pharmacy data to HealthFacts RI, pharmacy data (eligibility and claims) is less complete than the medical data in the database. This is because many health plans use a separate

---

[10] Counts include membership from 2011, through the "Counts as of" date for each payer.
[11] "Total members" is the number of individuals enrolled with each payer—because members can have multiple insurers, this is not a unique count across payers. Therefore, users cannot sum total members across payers.
[12] The number of members with "unknown" opt-out status is highest in the years prior to 2014, as this was before payers had notified members of opt-out. The number of unknowns decreases as the data becomes more recent (i.e. 2014 and 2015 data contain very few members with unknown opt-out status).

"carve out" PBM or third party administrator to administer pharmacy benefits, and many of these PBMs have less than the required 3,000 members to mandate data submission to HealthFacts RI.

Payer Line of Business	% of Medical Members with Pharmacy Coverage Reported*	% of Members Missing Pharmacy Coverage*
Aetna	52%	48%
Aetna (Medicare)	96%	4%
Cigna East	44%	56%
Cigna west	100%	0%
Harvard Pilgrim Healthcare	84%	16%
United Healthcare	70%	30%
United Healthcare (Student Resources)	100%	0%
United Healthcare (Medicare & Retirement)	100%	0%
United Healthcare of New England	100%	0%
United Behavioral Health	N/A**	N/A**
Blue Cross Blue Shield of RI	91%	9%
Tufts Health Plan	93%	7%
Neighborhood Health Plan	100%	0%
Medicaid	99%	1%

*According to 2011-2014 data
**United Behavioral Health administers behavioral health benefits only

Paid and Billed Amounts

Payers only report fee-for-service claims payments to HealthFacts RI. Payments associated with alternative payment arrangements, which are not at the claims-line level—such as bundled payments, capitated arrangements, and performance incentive payments—are not included in HealthFacts RI. As a result, some claims in HealthFacts RI may have zero dollar paid amounts (for example, if a payer pays $1,000 at the onset of maternity-related services under a bundled services arrangement, and pays $0 for each subsequent prenatal visit). Therefore, data users are cautioned against assuming these values to be the full cost of providing any particular healthcare services.

Medicaid Billed Amounts

Because of rate changes for certain Medicaid providers, the Medicaid program at times needs to make "mass adjustments", in which they adjust many claims at once. As part of these mass adjustments, Medicaid changes the billed amounts on these claims to the highest existing billed amount for any Medicaid claim – as a placeholder to ensure that the billed amount is sufficient for what the actual paid amount will eventually be. This results in a large variance between the amount that is billed and the actual amount that is paid. While the paid amount is accurate, users are cautioned against using Medicaid billed amounts in analyses, as they do not necessarily reflect the actual billed amount for the claim.

Data Release Restrictions

Unavailable Data Elements

In order to protect member privacy, the RI APCD Regulations specify certain data elements collected in HealthFacts RI as "unavailable" for release. "Unavailable" data elements cannot be released in any data set or report for any reason. These elements include:

- Insurance group or policy number;

- Insurance plan contract number;
- Certain provider ID numbers, such as provider Tax ID (this is often the provider's social security number); and
- Certain provider identifiable information, such as provider date of birth and street address.

Data Display and Reporting Policy

To prevent identification of members in HealthFacts RI, all HealthFacts RI users (including employees of state agencies) must adhere to the *RI APCD Data Display and Reporting Policy* for any publications derived from HealthFacts RI data. This policy states:

1. "RI APCD Data Outputs" refers to any reports, analyses, displays, products, tables, manuscripts, presentations, and other data uses derived from APCD Data.

2. All RI APCD Data Outputs must adhere to the CMS cell suppression policy, as stated in the CMS Identifiable Data Use Agreement, Section 9. This policy stipulates: "that no cell (e.g. admittances, discharges, patients, services) 10 or less may be displayed. Also, no use of percentages or other mathematical formulas may be used if they result in the display of a cell 10 or less."

3. Outputs must use complementary cell suppression techniques to ensure that cells with 10 or fewer observations cannot be identified by manipulating data in the Output.

4. Member-level records may not be disseminated or published in any form.

Requesters who are approved to receive claims-level data from HealthFacts RI data must sign a Data Use Agreement certifying that they will adhere to this policy.